

8. NOTES ON THE DESERT HEDGEHOG
(*HEMIECHINUS AURITUS COLLARIS* GRAY)

Several hedgehogs were reared in the laboratory for embryological studies. One morning I noticed that one female—the sex was actually revealed only when it gave birth; it is not easy to detect the sex of a hedgehog superficially because of the dense coat of spines covering its body—was ailing; it kept itself aloof from others, and was licking its vulva with the tongue. After a little while the animal began to tremble and lay down on the sandy floor of the cage in a most unusual position: the forelimbs were fully stretched in front, the snout was extended forward on the floor; the hind limbs were kept slightly erect, so as to keep the hind quarters a little above the ground. At 8 a.m. she gave birth to one young. During the delivery the snout of the young appeared first. Seeing this one of the males (later confirmed) caught hold of the snout of the young and actually pulled the baby out of the reproductive tract. I was wondering if he was helping with the delivery, but to my surprise, the young was soon devoured by the male. The mother continued to lie thus with the hind legs also fully stretched. After five minutes, she began to search for the young. At about 8.40 a.m. she was again observed to be very uneasy. (This time she was kept away from all the other hedgehogs.) She assumed the same posture as for the first delivery. This time she was also opening her mouth at intervals. The hind limbs were shaking violently. At 8.45 a.m. we could see the head of the baby coming out; then the body followed. The limbs were folded laterally. There was a series of fairly rapid muscular contractions around the vulva for the eversion of the foetus. Each series of contractions was separated by only a few seconds followed by a rest period of variable length before the next series of contractions started. Each series of contractions lasted for 4-5 seconds. There were five violent expulsive contractions before the offspring finally came out. The young was licked when the mother recovered after four minutes. The delivery took 4.20 minutes. After recovering, the mother very softly held the baby in her jaws and kept it under her body. At 11 a.m. and 1 p.m. it gave birth to two more young and kept all the three under itself. Altogether she gave birth to four young ones in a period of five hours. No blood or any tissue matter was noticed. Thus it may be concluded that the placenta in hedgehogs is of the Deciduous type.

During the breeding season another female *H. a. collaris* gave birth to two young only. Three *H. a. collaris* were dug out from their respective burrows with two offsprings each. Last year a female *Paraechinus micropus micropus* Blyth gave birth to only one young. Another female of the latter form was dug out with two young.

The breeding season lasts from July to September, but most of the births occur in August and September.

Apparently McCann's note (*JBNHS*, 1937, 26: 616) was the only observation on the breeding of the hedgehog, *H. a. collaris* (= *Hemiechinus collaris* Gray and Hardwicke) till now. McCann

concluded concerning the number of young born from his experience of abortion of some hedgehogs while in transport by car in Cutch. He mentions, 'from the premature births referred to above and disparity of age observed in the foetuses, it would appear that only one at a birth is normal.' He also mentioned that according to Dobson (*vide* F.B.I. Mammalia, p. 214), the number of young at a birth never exceeds four.

My observations, though too meagre for any conclusion about the usual number of offsprings, show that it varies from one to four in case of *H. a. collaris*. The European hedgehog, *Erinaceus europaeus*, gives birth to 1 to 7 offsprings, the 'most common' number being 5—two and three in each horn of the uterus (Deansley, R. 1934, *Phil. Trans. Roy. Soc.*, London 223, pp. 239-276).

Description of the Young:

The young were born with eyes closed. At the time of birth, they had only 2 mm. long spines, but after five hours these developed to 8 mm. The spines were still soft and had no fixed coloration. Some were dirty white and others black. In adult *H. a. collaris* the spines measure 30 mm.; they are largely dirty white with black tips. The young were capable of moving about in a small area of 8-10 in. They had a remarkable power of identifying their mother, and as soon as she came near all the young made a noise like *chu chi, chu chi*. The averages of measurements of the young of *H. a. collaris* are given below.

Weight	...	...	...	8.325 gms.
Length: tip of snout to tip of tail	...	...	...	47 mm.
Fore limb	...	...	...	26 mm.
Snout	...	...	...	10 mm.
Ear	...	...	...	5 mm.
Shank	...	...	...	12 mm.
Tail	...	...	...	5 mm.

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9. CANNIBALISM IN HEDGEHOGS

In a recent note (*JBNHS*, 51: 730) I recorded a case of a young hedgehog being devoured by adults, but was unable to ascertain if its mother had also partaken of the meal.

This year a female *Hemiechinus auritus collaris* Gray, kept in a large cage with thick layer of sand in the bottom, gave birth to two young. She dug a burrow in which to accommodate herself together with the young and was provided with such food as hedgehogs appear to relish in captivity, i.e., meat, frogs, milk etc. On the fourth day the young could not be found in spite of a thorough search being made in the sand and it can only be concluded that they were eaten by their mother.